

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 25, 26, 29-32, 64, 65 and 67-71 are presently pending in this application, Claims 25, 26, 29-32, 64, 65 and 67-70 having been amended, and Claim 71 having been newly added by the present amendment.

In the outstanding Office Action, Claims 25, 26, 29, 64 and 69 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inagaki et al. (U.S. Patent 5,837,155) in view of Wroe et al. (U.S. Patent 4,994,903); Claims 30-32, 67, 68 and 70 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inagaki et al. and Wroe et al., and further in view of Brandli et al. (U.S. Patent 5,227,012); and Claim 65 was rejected under 35 U.S.C. §103(a) as being unpatentable over Inagaki et al. and Wroe et al., and further in view of Misfeldt (U.S. Patent 3,972,755).

Claims 25, 26, 29-32, 64, 65 and 67-70 have been amended to clarify the subject matter recited therein and Claim 71 has been newly added herein. These claim amendments are not believed to narrow the scopes of the claims, and the amendments and addition in the claims are believed to find support in the specification, claims and drawings as originally filed. Thus, no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Before addressing the outstanding art rejections, a brief summary of Claim 25 as currently amended is believed to be helpful. Claim 25 is directed to a multilayer printed circuit board which includes: a resin substrate having a first surface and a second surface; a first resin insulating layer formed over at least one of the first and second surfaces of the resin substrate, the first resin insulating layer comprising a thermosetting polyolefin resin; a lower

metal layer formed on the first resin insulating layer and being flat and level; and a conductor circuit comprising a metal and formed on the lower metal layer. The lower metal layer has the same pattern as the conductor circuit and comprises at least one metal selected from the group consisting of metals of the 4th through 7th periods in Group 4A through Group 1B of the long-form periodic table of the elements, Al, and Sn, excluding Cu.

By providing such a lower metal layer, the conductor circuit more securely stay on the resin insulating layer without roughening its surface for adhesion to the resin insulating layer, thereby allowing the conductor circuit to be free of any roughened portions. Consequently, the conductor circuit can transmit a high frequency signal without transmission delay.

Inagaki et al. is directed to a multilayer print circuit board. Nevertheless, Inagaki et al. does not teach or suggest “a lower metal layer formed on the first resin insulating layer and being flat and level ..., wherein said lower metal layer has a same pattern as said conductor circuit and comprises at least one metal selected from the group consisting of metals of the 4th through 7th periods in Group 4A through Group 1B of the long-form periodic table of the elements, Al, and Sn, excluding Cu” as recited in amended Claim 25. On the contrary, Inagaki et al. is believed to show a copper film conductor laminated on an insulating resin layer, and the copper film conductor is roughened such that its roughened surface intimately laminates to the insulating resin layer when they are heated and pressed with a roller. Therefore, the structure recited in Claim 25 is clearly distinguishable from Inagaki et al., and furthermore, the Inagaki et al. device is believed to teach away from the structure recited in Claim 25.

Wroe et al. is directed to a circuit substrate, but does not teach or suggest “a lower metal layer formed on the first resin insulating layer and being flat and level ..., wherein said lower metal layer has a same pattern as said conductor circuit and comprises at least one metal selected from the group consisting of metals of the 4th through 7th periods in Group

4A through Group 1B of the long-form periodic table of the elements, Al, and Sn, excluding Cu” as recited in amended Claim 25. On the other hand, Wroe et al. simply shows a heat sink 30 which has an Invar portion and a Cu/Al portion attached to a substrate 12, and moreover, according to Wroe et al., circuit paths 14 are merely “a thin layer 26 of a metal such as copper, aluminum or copper-clad aluminum” As such, the Wroe et al. device is also believed to teach away from the structure recited in Claim 25. Hence, the structure recited in Claim 25 is clearly distinguishable from Wroe et al.

Likewise, the other references, Brandli et al. and Misfeldt, are not believed to teach or suggest the lower metal layer as recited in Claim 25 either, and the structure recited in Claim 25 is believed to be clearly distinguishable from both Brandli et al. and Misfeldt.

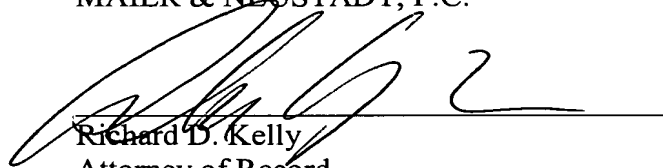
In sum, because none of Inagaki et al., Wroe et al., Brandli et al. and Misfeldt discloses the lower metal layer as recited in Claim 25, even the combined teachings of these cited references are not believed to render the structure recited in Claim 25 obvious.

For the foregoing reasons, Claim 25 is believed to be allowable. Furthermore, since Claims 26, 29-32, 64, 65 and 67-71 depend directly or indirectly from Claim 25, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 26, 29-32, 64, 65 and 67-71 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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